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## 12. OBSERVATIONS ON THE ECOLOGY OF RAFT SPIDERS (ARANEAE: PISAURIDAE) IN MADHYA PRADESH

The majority of spiders are terrestrial in habit, but those belonging to the genus *Dolomedes*, commonly known as raft spiders, are exceptional. These spiders are of semi-aquatic habit, and are found only in aquatic habitats near the edges of ponds and marshes (Levi and Levi 1968). These spiders are called raft spiders, due to the erroneous belief that they construct rafts. They are classified under Family Pisauridae, which is closely related to Family Lycosidae, the wolf spiders.

In December 2001, while collecting insects and spiders near the bank of a large water body called Dudhiya Talab along the Jabalpur-Nagpur Highway in Seoni district, Madhya Pradesh, some interesting brownish green spiders were noticed scurrying around the rotting leaves, vegetation

and algal bloom at the edge of the water body. At first glance, they appeared like wolf spiders, but on closer inspection, they were identified as raft spiders. On recognising these rare and unusual spiders, their behaviour was closely observed.

The spiders were medium sized (c. 10 mm long) and were mostly observed sitting on floating leaves, twigs and rotting vegetation near the edge of the pond, with 3 pairs of posterior legs on the substratum and one pair of front legs spread out, touching the water and waiting patiently to detect a prey. Whenever a spider felt threatened by the author, it would run forward rapidly on the surface of the water, just like a water strider, and sit on a floating leaf about 2-3 m away from the edge of the pond. On many occasions, when an attempt was made to catch a spider, it would run forward

and go underwater, clinging to the surface of a leaf or any other object floating in the water. Each spider thus hiding, emerged cautiously a few minutes later. Many wolf spiders (Family Lycosidae) were also present near the edge of the same pond, revealing that they were the main competitors of raft spiders in the habitat. The raft spiders could not be observed catching prey, so a few specimens were caught with the help of a sweep net and kept alive in some vials. They were given some aquatic hemipteran bugs collected from the same habitat. The spiders readily fed on these bugs. Later on, the collected spiders were preserved in 70% ethyl alcohol and deposited in the Collection of the Zoological Survey of India, Jabalpur, Madhya Pradesh.

A review of the literature reveals that there is no previous record of *Dolomedes* spiders or of the Family Pisauridae from Madhya Pradesh. These spiders feed mainly on terrestrial and aquatic insects found in their habitat, but there have also been reports of them catching small fish and tadpoles (Gertsch 1979, Mafham and Mafham 1983, Kumar *et al.* 1999). As a result, these spiders are also known as fishing spiders.

They can also remain underwater for considerable periods. Gertsch (1979) has reported them remaining under water for 45 minutes at a stretch. Kumar *et al.* (1999) have reported *Dolomedes fimbriatus* remaining under water, clinging to the roots of the aquatic plant *Pistia* for a maximum duration of five and a half hours. They suggest that the spider's body hairs retain air bubbles that make contact with the respiratory orifices, and may thus provide the oxygen required for breathing under water.

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### 13. REDISCOVERY OF *AERVA WIGHTII* HOOK. F. (AMARANTHACEAE), AN ENDEMIC, PRESUMED EXTINCT SPECIES, FROM TIRUNELVELI DISTRICT, TAMIL NADU, INDIA

(With one text-figure)

J.D. Hooker described *Aerva wightii*, Amaranthaceae, in 1885, based on a collection by Robert Wight from Courtallum, Tirunelveli district, Tamil Nadu, India. Gamble collected it in September 1914 from a different locality, Naterikal, in the same district. Ahmedullah and Nayar (1987) treated it

as an endemic to this district. Bhattacharyya and Haldar (1990) stated its survival as indeterminate and suggested locating populations in the natural habitat for introduction in botanic gardens for conservation and study. Nayar (1996) doubted its presence in nature, assigned it extinct category